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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,600	12/23/2005	Herve Le Gallic	003D.0074.U1(US)	8963
29683	7590	04/24/2006	EXAMINER	
HARRINGTON & SMITH, LLP			HYEON, HAE M	
4 RESEARCH DRIVE			ART UNIT	
SHELTON, CT 06484-6212			PAPER NUMBER	

2839

DATE MAILED: 04/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/541,600

Applicant(s)

LE GALLIC, HERVE

Examiner

Hae M. Hyeon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 July 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 7/6/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Information Disclosure Statement*

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

The present specification includes the reference numbers US 5,540,599 and EP-490,860 A1, which are not listed in the IDS filed on July 6, 2005.

### *Drawings*

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "**second projection 31**" recited on page 7, line 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

*Specification*

3. The disclosure is objected to because of the following informalities:
- On page 7, line 5, it seems that “the fires contact end 5” should be -- the first contact terminal 5 --.
  - The last line on page 7 recites, “contact terminal 5” and page 8, lines 20-21 recite, “contact terminal 5.” The examiner suggests the applicant to change “contact terminal 5” on the pages 7 and 8 to -- first contact terminal 5 -- because the terminology should be consistent through out the specification.

Appropriate correction is required.

*Claim Objections*

4. Claims 1-8 are objected to because of the following informalities:
- The examiner suggests the applicant to delete the phrase “**designed to be**” in claims 1-8.
  - Claim 1, line 14, changed “characterized in that” to -- wherein --.
  - In the preamble of claims 2-8, the examiner suggests the applicant to change “characterized in that” to -- comprising --.
  - Claim 1, line 16, the examiner suggests the applicant to change “protuberance mounted” to -- protuberance formed --.
  - Claim 1, lines 12-13, “a second corresponding contact terminal” should be -- **the** second corresponding contact terminal -- since it is already introduce in line 7.
  - The last line of claim 6, the comma “,” after the word “rest” should be deleted.

- Claims 1-8, it seems that the article, “the” is missing from the sentences. The claims have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in claims 1-8.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

6. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 15-16 recite, “the contact end of the first contact terminal comprises at least one protuberance mounted at the end of **its elongated part**.” First, there is insufficient antecedent basis for the limitation “its elongated part” in claim 1. Second, it is not clear which part of the contact end is elongated part since claim 1 does not describe the elongated part of the contact end. Claim 1 only describes in lines 5-6 that the first compression contact terminal being elongated along an elongation axis. Therefore, claim 1 recites that the first compression contact terminal as a whole terminal is elongated along the elongation axis, but not just the contact end. Also, according to the lines 5-6, the whole first contact terminal is elongated along the elongation axis. However, claim 4 recites, “elongation axis of the contact end.” It is not clear how the elongation axis extends.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishimatsu (US 6,312,295 B2) in view of Takagi et al (US 6,524,140 B2).

Nishimatsu discloses a plug connector 10 into a fixed-base connector 40 along a connection axis comprising an insulating body 13 having cavities 12, each cavity 12 defining an inner periphery; at least one first compression contact terminal 14 including a connection end 14B, an intermediate spring part 14C and a contact end 14A; and a second corresponding contact terminal 41 mounted in the fixed-base connector, having a facial contact end 41A. The cavity 12 includes an inlet 12B and an outlet 12A. The inlet 12B is near the contact end 14A and the outlet 12A is near the connection end 14B. The contact end 14A of the first contact terminal 14 forms an elongated part terminating with a rounded edge, which the edge is provided with the protuberance 14E', and is supported against a straight edge (see Fig. 5) defined at the inlet 12B of the cavity 12 at rest. However, the intermediate spring part 14C of the first contact terminal 14 does not have a series of coils which is supported against a shoulder formed in the cavity so as to incline elongation axis relative to connection axis; and the contact end 14A does not have first and second protuberances stepped along the elongation axis of the contact end 14A. Also, the connection end 14B is not connected to a printed circuit board.

Takagi discloses a plug connector 11 comprising an insulating body 21 having a cavity 23 and a planar compression contact terminal 22 having a contact end 24 and intermediate coil spring part 26, wherein a first coil spring 25 near the contact end 24 is supported against a shoulder 31 formed in the cavity 23 so as to incline an elongation axis relative to a connection axis X (see Fig. 3).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the plug connector taught by Nishimatsu such that it would have a shoulder in a cavity for a contact end of a first contact terminal to be supported as taught by Takagi in order to incline an elongation axis relative to a connection axis.

Regarding to first and second protuberances, it only deals with duplication of parts. It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Regarding to the connection end connecting to a printed circuit board, any connector can be modified to connect to a printed circuit board, an electronic device or a cable. Furthermore, the fixed-base connector 40 shows a connector being mounted on a printed circuit board.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 5,807,123 by Spiegelaar et al., US Patent No. 5,967,856 by Meller and US Patent No. 6,083,059 by Kuan.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M. Hyeon whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on (571) 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hae M Hyeon  
Primary Examiner  
Art Unit 2839

hnh

*hnh*

*Hae Moon Hyeon*